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**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEW JERSEY**

Jason Zangara, Plaintiff, v. National Board of Medical Examiners, Defendant.	Civil No. 3:22-cv-01559-GC-LHG Motion Returnable November 7, 2022
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SECOND DECLARATION OF CAROL MORRISON, PH.D.

1. My name is Carol Morrison. I am a Principal Psychometrician at the National Board of Medical Examiners (“NBME”). Unless otherwise stated, I have personal knowledge of the facts stated below, based on my work at NBME and my review of company records maintained in the ordinary course of business, as referenced below.

2. NBME is a non-profit organization whose mission is to help protect the public health through the development and administration of high-quality examinations for health professionals.

3. NBME co-sponsors the United States Medical Licensing Examination (“USMLE”), which is made up of three “Step” exams - Steps 1, 2 Clinical Knowledge (Step 2 CK) and 3. The USMLE assesses an examinee’s ability to apply knowledge, concepts, and principles and to demonstrate fundamental patient-centered skills that constitute the basis of safe and effective patient care. Licensing authorities across the country rely upon the USMLE to help evaluate the qualifications of individuals seeking an initial license to practice medicine.

4. NBME separately develops and sells standardized “subject examinations” for use as assessment tools by medical educators. NBME subject examinations provide medical schools with a tool for measuring examinees’ understanding of the basic and clinical sciences.

5. NBME subject examinations include (among others) the Clinical Science Subject Examinations, the Comprehensive Basic Science Examination, and the Comprehensive Clinical Science Examination.

a. The Clinical Science Subject Examinations were developed to help medical schools assess third-year medical students’ knowledge in specific disciplines at the end of traditional clerkships. Clinical Science Subject

Examinations include the Ambulatory Care Subject Exam, the Clinical Neurology Subject Exam, the Family Medicine Modular Subject Exam, the Medicine Subject Exam, the Obstetrics & Gynecology Subject Exam, the Pediatrics Subject Exam, the Psychiatry Subject Exam, and the Surgery Subject Exam.

b. The Comprehensive Basic Science Examination (“CBSE”) is a general, integrated achievement test covering material typically learned during basic science education, with somewhat more emphasis on second-year courses in medical schools with traditional curricula. The exam reflects content coverage on USMLE Step 1 and uses the same item formats as the Step 1 exam. Performance on the CBSE can help medical schools and students identify students’ weaknesses prior to students taking the Step 1 examination.

c. The Comprehensive Clinical Science Subject Exam (“CCSE”) is a general, integrated achievement test covering material learned during core clinical clerkships. The exam reflects content covered on the USMLE Step 2 exam.

6. Medical schools and other institutions that utilize NBME subject examinations choose the subject examinations they will order and set individual policies and procedures for when the examinations will be taken, who takes the

examinations, and how the institution will use the scores, including whether their students must achieve a minimum score on the test and, if so, what that minimum score will be. NBME Grading Guidelines provide information to medical schools to aid with their selection of any minimum passing (or Honors) scores, but it is up to each medical school and other institution that utilizes NBME subject examinations to decide whether to set a minimum passing score on the test and decide what that minimum score will be.

7. Only a school may purchase a subject examination, not an individual student.

8. Most of the institutions that use subject examinations are medical schools, which usually administer the subject examinations at their schools. Institutions may also opt to have their subject examinations administered at a test center run by Prometric, Inc., a third-party vendor.

9. NBME also develops and sells the Comprehensive Basic Science Self-Assessment (“CBSSA”). The CBSSA is a practice test designed for students planning to take the USMLE Step 1. Examinees can order CBSSAs directly from NBME and take the practice tests at any time for one year after ordering. Medical schools, residency programs, and other medical education organizations can also order vouchers for the CBSSA for their students.

10. Clinical Science Subject Examinations, CBSE, CCSE, and CBSSA scores are determined based on the number of correct answers the examinee provides on the exam. If an examinee does not answer a question, that counts as a wrong answer and results in a lower score. Scores are not determined based on a comparison of how the examinee performed compared to other examinees.

11. It is my understanding that the plaintiff in this case believes that the Clinical Science Subject Examinations, CBSE, CCSE, and the CBSSA are scored on a “curve.” This is not a technical term that is used in the field of psychometrics, but it is my understanding that this term is used colloquially to refer to scoring or grading examinees or students relative to the performance of other examinees or students. That is *not* how these examinations are scored. As discussed above, an examinee’s score is based on the number of correct answers the examinee provides on the exam, not on how his or her performance compares to other examinees.

12. Under current score reporting, examinees who take any of the Clinical Science Subject Examinations, the CBSE, or the CBSSA receive a Total Equated Percent Correct Score that represents the percentage of content mastered, with scores ranging from 0% to 100%. To obtain a Total Equated Percent Correct Score, a raw score is first determined based on the number of correct answers and incorrect answers (including unanswered questions that are counted as incorrect). An equated score is then determined using a statistical process that adjusts scores from different

test forms in light of the different levels of question difficulty. This equated score is then used to calculate the percentage of items in a predefined set of items representing the content domain assessed by the particular examination that would be answered correctly based on the examinee's proficiency.

13. Equating is a standard assessment practice which ensures that a score for an exam taken on one form is equivalent to — *i.e.*, has the same meaning as — a score from another form of that exam, even though the questions on the two exams are not identical.

14. The Total Equated Percent Correct Score is based on the number of correct answers the examinee provided, and it is not based on how the examinee performance compared to other examinees. It is not scored on a “curve,” as colloquially understood.

15. For the CCSE, an examinee receives a 3-digit scaled score based on the number of correct answers the examinee provided. To obtain a 3-digit scaled score, a raw score is first determined based on the number of correct answers and incorrect answers (including unanswered questions that are counted as incorrect). An equated score is then determined using a statistical process that adjusts scores from different test forms in light of the different levels of question difficulty. The CCSE score represents an estimate of an examinee's performance on the USMLE Step 2 CK if they had taken both exams under the same conditions and with the same level of

knowledge. A statistical model based on the performance of a group of examinees testing within one week of taking Step 2 CK is used to help predict the examinee's probability of passing on a different test (Step 2 CK) based on how the examinee actually performed on the CCSE. Although prior performance of other examinees is used to predict the examinee's probability of passing Step 2 CK, the examinee's CCSE score is based on the number of correct answers the examinee provided. Examinees also receive an equated percent correct score in specific content areas indicating the percentage of the content they have mastered.

16. When NBME provides medical schools with score and performance feedback for their students who take the CBSE, CCSE, and any Clinical Science Subject Examination, it includes various reports, including normative data to aid in the interpretation of examinee performance. While normative data allows a school to compare the performance of their students to nationally representative groups taking the same examination, each student's score is based on their own test performance.

17. The USMLE also is not scored on a "curve," as colloquially understood. An examinee's score on Step 1 and Step 2 of the USMLE is based on the number of correct answers the examinee provides on the exam, not on how his or her performance compares to other examinees. An examinee's score on Step 3 of the USMLE is based on the number of correct answers the examinee provides to the

multiple-choice section of the exam and is also affected by the examinee's performance on case simulations that are part of the examination. On the examinations containing multiple-choice items, the percentages of correctly answered items required to pass varies by Step and from form to form within each Step. However, examinees typically must answer approximately 60 percent of items correctly to achieve a passing score. The USMLE program provides a recommended pass or fail outcome on all Step examinations. Recommended performance standards for the USMLE are based on a specified level of proficiency. As a result, no predetermined percentage of examinees will pass or fail the examination.

18. Jason Zangara took the CBSE at various times between April 7, 2017 and February 11, 2022. At those times, CBSE scores were reported as a scaled score that approximated a USMLE Step 1 score. These scaled scores were based on the number of correct answers, not on how his performance compared to other examinees.

19. NBME subject exams are scored electronically as part of the computer-based test delivery process. NBME then provides the score reports to the schools that purchased the exam for use in their curriculum. If they choose to do so, schools can provide copies of score reports (now called "Performance Reports") to their students.

20. CBSSA exams are also scored electronically and scores are provided directly to the examinee and/or their schools.

21. It is my understanding that if an examinee seeks disability-based testing accommodations on a subject examination, the examinee's institution, not NBME, determines whether any accommodations are warranted, decides what specific accommodations may be reasonable for a particular examinee, and bears all costs associated with any such accommodations. The school then advises NBME on the accommodations it wishes to grant.

22. For the CBSSA, examinees can choose to take the self-assessment in either a standard-paced or self-paced format.

23. Attached at Exhibit A is a true and correct copy of a December 15, 2021 document entitled "Common Questions about CBSE/CBSSA Score Report Changes."

24. Attached at Exhibit B is a true and correct copy of a CBSE Score Interpretation Guide for Students and Examinee Performance Profile for Jason Andrew Zangara for the test date April 7, 2017.

25. Attached at Exhibit C is a true and correct copy of a CBSE Score Interpretation Guide for Students and Examinee Performance Profile for Jason Andrew Zangara for the test date June 19, 2018.

26. Attached at Exhibit D is a true and correct copy of a CBSE Score Report for Jason Andrew Zangara for the test date November 14, 2019.

27. Attached at Exhibit E is a true and correct copy of an Examinee Performance Profile Report for the Pediatrics Examination (a Clinical Science Subject Examination) for Jason Andrew Zangara dated June 18, 2021.

28. Attached at Exhibit F is a true and correct copy of an Examinee Performance Profile Report for the Psychiatry Examination (a Clinical Science Subject Examination) for Jason Andrew Zangara dated June 26, 2021.

29. Attached at Exhibit G is a true and correct copy of an Examinee Performance Profile Report for the Family Medicine Modular Core Examination (a Clinical Science Subject Examination) for Jason Andrew Zangara dated July 28, 2021.

30. Attached at Exhibit H is a true and correct copy of an Examinee Performance Profile Report for the Medicine Examination (a Clinical Science Subject Examination) for Jason Andrew Zangara dated August 3, 2021.

31. Attached at Exhibit I is a true and correct copy of a CBSE Score Report for Jason Andrew Zangara dated September 17, 2021.

32. Attached at Exhibit J is a true and correct copy of a CBSE Score Report for Jason Andrew Zangara dated November 1, 2021.

33. Attached at Exhibit K is a true and correct copy of a CBSE Score Report for Jason Andrew Zangara dated February 11, 2022.

34. Attached at Exhibit L is a true and correct copy of a Roster Report for Caribbean Medical University School of Medicine for February 11, 2022, reporting a CBSE score for Jason Andrew Zangara and the then-applicable CBSE Score Interpretation Guide

35. Attached at Exhibit M is a true and correct copy of a CBSSA Examinee Performance Report for Jason Zangara dated March 27, 2022.

36. Attached at Exhibit N is a true and correct copy of a CBSSA Examinee Performance Report for Jason Zangara dated February 28, 2023.

37. Attached at Exhibit O is a true and correct copy (formatted to .pdf) of an NBME Test Accommodation Notification Form for the Caribbean Medical University School of Medicine for the CBSE test window starting January 31, 2022.

38. Attached at Exhibit P is a true and correct copy of a current sample Examinee Performance Report for the CBSE.

39. Attached at Exhibit Q is a true and correct copy of a current sample Examinee Performance Report for a Clinical Science Subject Examination (the Psychiatry Examination).

40. Attached at Exhibit R is a true and correct copy of a current sample Examinee Performance Report for the CCSE.

41. Attached at Exhibit S is a true and correct copy of a current sample Examinee Performance Report for the CBSSA.

42. Attached at Exhibit T is a true and correct copy of the currently posted CBSE Score Interpretation Guide.

43. Attached at Exhibit U is a true and correct copy of a current CCSE Score Interpretation Guide.

44. Attached at Exhibit V is a true and correct copy of a current Clinical Neurology Examination (a Clinical Sciences Subject Examination) Score Interpretation Guide.

45. Attached at Exhibit W is a true and correct copy of a current guide for the CBSSA and Gauging Readiness for USMLE Step 1.

I declare under the penalty of perjury that the foregoing is true and correct.
Executed on August 7, 2023.

DocuSigned by:

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Carol Morrison, Ph.D.